

REMARKS**I. General**

Claims 1-22 are pending, and claim 1 is amended by this response. The Office Action mailed April 13, 2006 rejects claims 1-9 and 20-22 and allows claims 10-19. The issues in the current Office Action are as follows:

- Claims 1-6 are rejected under 35 U.S.C. §102 as being anticipated by US 6,621,067 (hereinafter, *He*).
- Claims 1 and 2 are rejected under 35 U.S.C. §102 as being anticipated by US 5,127,066 (hereinafter, *Poggiolini*).
- Claims 7-9 and 20-22 are rejected under 35 U.S.C. §102 as being anticipated by US Patent Application Publication 2002/0109901 (hereinafter, *Suh*).
- Claims 10-19 are allowed.

Applicant hereby traverses the rejections and requests reconsideration and withdrawal in light of the remarks contained herein.

II. Allowed Subject Matter

Applicant notes with appreciation that claims 10-19 are indicated by the Examiner as being allowed. While Applicant presents arguments herein with regard to rejected claims, Applicant also thanks the Examiner for this indication of allowable subject matter.

III. Applicant's Record Under M.P.E.P. § 713.04 of Interview with the Examiner

Applicant's attorney appreciates the Examiners' time and consideration in conducting the telephone interview of June 29, 2006. Applicant respectfully submits the following record of the telephone interview under M.P.E.P. § 713.04.

The following persons participated in the interview: Examiner David Lee and Applicant's Attorney Thomas Kelton (reg# 54,214).

Claim 1 was discussed with reference made to *He* and *Poggiolini*. An agreement was reached that claim 1 distinguishes over *Poggiolini*. An agreement was also reached that the feature, “said periodically changing polarization-scrambled optical signal covers approximately an entire Poincaré sphere surface during each time period of said periodic changing, over a plurality of periods” in amended claim 1 is not taught by *He*.

In view of the telephone interview of June 29, 2006, Applicant hereby presents amended claim 1 for the Examiner’s consideration.

IV. Claim Amendments

Claim 1 is amended to recite, in part, “said periodically changing polarization-scrambled optical signal covers approximately an entire Poincaré sphere surface during each time period of said periodic changing, over a plurality of periods.” (Underlining indicates amendment). Since claim 1 recites, “during each time period of said periodic changing,” it is believed that the amendment adding “over a plurality of periods,” is merely a clarifying amendment and does not narrow the scope of the claim. No new matter is added.

V. Claim Rejections

A. Rejections over *He*

The Office Action rejects claims 1-6 under 35 U.S.C. §102(e) as being anticipated by *He*. Pursuant to the telephone interview, Applicant has amended independent claim 1 to recite, in part, “said periodically changing polarization-scrambled optical signal covers approximately an entire Poincaré sphere surface during each time period of said periodic changing, over a plurality of periods.” It was agreed that such feature is not taught by *He*.

Claims 2-6 ultimately depend from independent claim 1, and thus each of claims 2-6 inherits all limitations of claim 1. Therefore, for at least the reasons advanced above in addressing the anticipation rejection of claim 1, each of claims 2-6 set forth features and limitations not recited by *He*. Hence, Applicant respectfully request removal of the 35 U.S.C. § 102 rejection of record.

B. Rejections over *Poggiolini*

The Office Action rejects claims 1 and 2 under 35 U.S.C. §102(e) as being anticipated by *Poggiolini*. It was agreed in the telephone amendment that *Poggiolini* does not teach every feature of claim 1.

Claim 2 depends from independent claim 1, and thus claim 2 inherits all limitations of claim 1. Therefore, for at least the reasons advanced above in addressing the anticipation rejection of claim 1, claim 2 sets forth features and limitations not recited by *Poggiolini*. Hence, Applicant respectfully requests removal of the 35 U.S.C. § 102 rejection of record over *Poggiolini*.

C. Rejections over *Suh*

The Office Action rejects claims 7-9 and 20-22 under 35 U.S.C. §102(e) as being anticipated by *Suh*. Applicant respectfully traverses this rejection.

Claims 7 and 20 each recites:

a first optical element coupled to said first polarization controller and operable to receive and to cause a fixed polarization dependent loss (PDL) in said first intermediate optical signal to produce a second intermediate optical signal;
and
a second optical element substantially identical to said first optical element, said second optical element being operable to receive and to cause a fixed polarization dependent loss (PDL) in said third intermediate optical signal to produce an output optical signal

Applicant respectfully asserts that *Suh* fails to teach at least the above recited elements. The Office Action indicates that birefringent elements 758 of FIGURE 16A of *Suh* teaches the above recited elements. See Office Action at 4. However, the description of birefringent elements 758 appearing in paragraph 141 of *Suh* only states:

PMD generator [754] can include two or more birefringent elements 758, such as polarization maintaining fibers, and intermediate polarization transformer 756.

Suh does not teach the claimed substantially identical first or second elements operable to receive and to cause a fixed polarization dependent loss in respective intermediate optical signals to produce a subsequent (intermediate) optical signal. *Suh* in paragraph [0053] describes birefringent elements, such as a highly birefringent fiber, as providing retardation, but not a fixed polarization dependent loss.

In the Response to Arguments section of the Office Action mailed October 5, 2005 (see page 6), the Office Action asserts that the fibers produce a polarization dependent loss (PDL). Even if that assertion is true, there is no detail disclosed by *Suh* indicating that such PDL is fixed. Neither the birefringent fiber itself nor retardation of the signal is enough to teach causing a fixed polarization dependent loss. Therefore, Applicant respectfully asserts that at least for the above reason independent claims 7 and 20 are patentable over the 35 U.S.C. § 102 rejection of record.

Further, claims 7 and 20 each recite, in part, “said first optical polarization controller being operable to adjust the polarization state of said input optical signal to produce a first intermediate optical signal,” and “said second optical element being operable to receive and to cause a fixed polarization dependent loss (PDL) in said third intermediate optical signal to produce an output optical signal.” *Suh* does not teach at least this feature.

The Office Action relies on item 752 of figure 16A of *Suh* to teach the first optical polarization controller and relies on scrambler 820 of figure 17 to teach “operable to adjust the input optical signal to produce a first intermediate optical signal.” Office Action at 4. In other words, the Office Action uses item 752 to teach the first optical polarization controller itself and relies on scrambler 820 to teach features describing the first optical polarization controller. However, scrambler 820 of figure 17 is not included in item 752 of figure 16A, and in fact, scrambler 820 is wholly unrelated to item 752. Note that figure 16A is a PMD compensator, while scrambler 820 of figure 17 is a part of a test apparatus to demonstrate a control method. See *Suh* at [0140]-[0142] and [0148]. It appears that scrambler 820 is merely used to provide a demonstration signal for controller 830. See *id.* Since *Suh* does not teach that there is any relationship between item 752 and scrambler 820, it is inappropriate to combine the two to show the features of a single element. In order for a reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he elements must be arranged

as required by the claim.” M.P.E.P. § 2131, citing *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). The same can be said for item 756 and scrambler 820. Accordingly, *Suh* fails to teach or suggest all elements of claims 7 and 20.

Claims 8 and 9 each depend from independent claim 7, and thus each of claims 8 and 9 inherit all limitations of claim 7. Claims 21 and 22 each depend from independent claim 20, and thus each of claims 21 and 22 inherit all limitations of claim 20. Therefore, for at least the reasons advanced above in addressing the rejection of claims 7 and 20, each of claims 8, 9, 21 and 22 set forth features and limitations not recited by *Suh*. Hence, Applicant respectfully asserts that claims 8, 9, 21 and 22 are also patentable over the 35 U.S.C. § 102 rejection of record. Accordingly, withdrawal of the 35 U.S.C. §102(e) rejection of claims 7-9 and 20-22 is respectfully requested.

VI. Conclusion

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 06-2380, under Order No. 51519/P001US/10203244 from which the undersigned is authorized to draw.

Dated: July 6, 2006

Respectfully submitted,

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